

jc51110 S. PTO
08/30/00

of

and

“Sanitary undergarment”

UNITED STATES LETTERS PATENT

THE UNIVERSITY OF CHICAGO

FIELD OF THE INVENTION

Sub
B5

0963151

Generally when sanitary napkins are provided with flaps, the flaps extend laterally from a central absorbent means and are intended

to be folded around the edges of the wearer's panties in the crotch region. Commonly, the flaps are provided with an attachment means for either affixing the flaps to the underside of the wearer's panties or to the opposing flap. The flaps are generally effective for preventing exudates from soiling the edges of the wearer's panties.

While sanitary pads having flaps are commonly viewed as providing better protection against soiling as compared to sanitary pads without flaps, some women find applying sanitary pads having flaps to be inconvenient for various reasons. For instance, some women find it to be difficult to attach the flaps to the underside of the crotch of their panties. This can be due to factors such as the tendency for the adhesive fasteners on the flaps to stick to themselves or to other parts of the sanitary napkin. Furthermore, the adhesive fasteners on the flaps also have a tendency to come unglued after an extended use and get stuck on the wearer's skin. As a result, some women still prefer a sanitary napkin without flaps. Some women who generally prefer a sanitary napkin with flaps, occasionally (such as during periods of light flow) prefer a sanitary napkin without flaps.

Sub
B6

- . No. 4,911,701 issued to Mavinkurve
- . No. 5,125,918 issue to Seidy
- . Nos. 5,154,715 and 5,221,275 issued
- . No. 4,940,462

- . No. 4,911,701 issued to Mavinkurve
- . No. 5,125,918 issue to Seidy
- . Nos. 5,154,715 and 5,221,275 issued
- . No. 4,940,462

- . No. 4,911,701 issued to Mavinkurve
- . No. 5,125,918 issue to Seidy
- . Nos. 5,154,715 and 5,221,275 issued
- . No. 4,940,462

- . No. 4,911,701 issued to Mavinkurve
- . No. 5,125,918 issue to Seidy
- . Nos. 5,154,715 and 5,221,275 issued
- . No. 4,940,462

050343
050344
050345
050346
050347
050348
050349
050350
050351
050352
050353
050354
050355
050356
050357
050358
050359
050360
050361
050362
050363
050364
050365
050366
050367
050368
050369
050370
050371
050372
050373
050374
050375
050376
050377
050378
050379
050380
050381
050382
050383
050384
050385
050386
050387
050388
050389
050390
050391
050392
050393
050394
050395
050396
050397
050398
050399
050400
050401
050402
050403
050404
050405
050406
050407
050408
050409
050410
050411
050412
050413
050414
050415
050416
050417
050418
050419
050420
050421
050422
050423
050424
050425
050426
050427
050428
050429
050430
050431
050432
050433
050434
050435
050436
050437
050438
050439
050440
050441
050442
050443
050444
050445
050446
050447
050448
050449
050450
050451
050452
050453
050454
050455
050456
050457
050458
050459
050460
050461
050462
050463
050464
050465
050466
050467
050468
050469
050470
050471
050472
050473
050474
050475
050476
050477
050478
050479
050480
050481
050482
050483
050484
050485
050486
050487
050488
050489
050490
050491
050492
050493
050494
050495
050496
050497
050498
050499
050500
050501
050502
050503
050504
050505
050506
050507
050508
050509
050510
050511
050512
050513
050514
050515
050516
050517
050518
050519
050520
050521
050522
050523
050524
050525
050526
050527
050528
050529
050530
050531
050532
050533
050534
050535
050536
050537
050538
050539
050540
050541
050542
050543
050544
050545
050546
050547
050548
050549
050550
050551
050552
050553
050554
050555
050556
050557
050558
050559
050560
050561
050562
050563
050564
050565
050566
050567
050568
050569
050570
050571
050572
050573
050574
050575
050576
050577
050578
050579
050580
050581
050582
050583
050584
050585
050586
050587
050588
050589
050590
050591
050592
050593
050594
050595
050596
050597
050598
050599
050600
050601
050602
050603
050604
050605
050606
050607
050608
050609
050610
050611
050612
050613
050614
050615
050616
050617
050618
050619
050620
050621
050622
050623
050624
050625
050626
050627
050628
050629
050630
050631
050632
050633
050634
050635
050636
050637
050638
050639
050640
050641
050642
050643
050644
050645
050646
050647
050648
050649
050650
050651
050652
050653
050654
050655
050656
050657
050658
050659
050660
050661
050662
050663
050664
050665
050666
050667
050668
050669
050670
050671
050672
050673
050674
050675
050676
050677
050678
050679
050680
050681
050682
050683
050684
050685
050686
050687
050688
050689
050690
050691
050692
050693
050694
050695
050696
050697
050698
050699
050700
050701
050702
050703
050704
050705
050706
050707
050708
050709
050710
050711
050712
050713
050714
050715
050716
050717
050718
050719
050720
050721
050722
050723
050724
050725
050726
050727
050728
050729
050730
050731
050732
050733
050734
050735
050736
050737
050738
050739
050740
050741
050742
050743
050744
050745
050746
050747
050748
050749
050750
050751
050752
050753
050754
050755
050756
050757
050758
050759
050760
050761
050762
050763
050764
050765
050766
050767
050768
050769
050770
050771
050772
050773
050774
050775
050776
050777
050778
050779
050780
050781
050782
050783
050784
050785
050786
050787
050788
050789
050790
050791
050792
050793
050794
050795
050796
050797
050798
050799
050800
050801
050802
050803
050804
050805
050806
050807
050808
050809
050810
050811
050812
050813
050814
050815
050816
050817
050818
050819
050820
050821
050822
050823
050824
050825
050826
050827
050828
050829
050830
050831
050832
050833
050834
050835
050836
050837
050838
050839
050840
050841
050842
050843
050844
050845
050846
050847
050848
050849
050850
050851
050852
050853
050854

SUMMARY

3

wearer when attempting to attach the wings or flaps of a sanitary pad to the underside of the wearer's panties. Furthermore, there exists a need for an underwear that provides a way to keep the flaps tucked in place for a long time, away from the wearers skin, while still providing the protection of side flaps. Furthermore, there also exists a need for underwear which reduces shifting of the sanitary pad with wings to a minimum when worn by the wearer.

M 9-18-02
9-18-02
9-18-02
The present invention is a ^{new} sanitary underwear used with an absorbent article, such as a sanitary napkin that has a pair of panty covering components (or "side wrapping elements"). The present invention is especially meant to provide coverage to the wearer's panties to reduce staining of the edges of the panty crotch (or "side soiling") when the underwear is pulled up adjacent to the wearer's body.

M 9-18-02
Another object of the present invention is to provide an underwear which is worn with an absorbent article, such as a sanitary napkin with wings or flap extensions and provide coverage to the wearer's panties to reduce side soiling (i.e., staining of the edges of the panty crotch).

M 9-18-02
It is another object of the present invention to provide an underwear to be used with an absorbent article, such as a sanitary

napkin with flaps that folds around the sides of the wearer's
panties yet away from the wearer's skin.

It is yet another object of the present invention to provide
underwear that allows the wings or the flaps in a sanitary pad to
fold around the sides of the wearer's panties for an extended
period of time.

It is still another object of the present invention to provide a
underwear that reduces crumpling and other types of transverse
deformation usually experienced by the wearer of a sanitary napkin
with wings.

These and other objects of the present invention will be more
readily apparent when considered in reference to the following
description and when taken in conjunction with the accompanying
drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

While the specification concludes with claims particularly
pointing out and distinctly claiming the subject matter which is
regarded as forming the present invention, it is believed that the
invention will be better understood from the following description
when taken in conjunction with the accompanying drawings in which:

FIG. 1 is substantially a perspective overview of the preferred embodiment for the present invention.

FIG. 2 is substantially a plan view for the present invention showing an absorbent pad in an open position.

FIG. 3 is substantially a plan view for the present invention showing an absorbent pad in a closed position.

FIG. 4 is substantially an overview of the known prior art.

FIG. 5 is substantially a top view of an internal crotch portion.

FIG. 6 substantially illustrates the internal crotch portion when attached onto a prior art panty.

FIG. 7 substantially illustrates a perspective overview of a second embodiment for the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring now in detail to the drawings wherein like characters correspond to like elements throughout the various views.

In FIG. 1 is shown the preferred embodiment for the present invention wherein (10) ~~substantially represents an overview of a~~ sanitary undergarment, such as a panty, which is formed from a front body portion (12), a rear body portion (14), an external crotch portion (16) and an internal crotch portion (18), with external crotch portion (16) and internal crotch portion being substantially of the same shape and size.

Sub
B3

Sub B

Sub
B8

Sub
B9

of each lateral wing extension (46-C & 46-D) is now secured onto bottom surface (18-B) of internal crotch portion (18).

It is to be understood that the present invention may include additional embodiments. For example, a second embodiment is shown in FIG. 7 which substantially represents an embodiment which would be most suitable for men, or boys who have medical problems such as incontinence problems, or the like. Whereby, the present invention is formed into a pair of typical boxer shorts (54).

Please note the applicants do not disclose or address the actual construction of the boxer shorts (54) as such shorts are very well known. However, the following specification teaches how the present pair of boxer shorts differs from the known prior art which is what the applicants contend to be the invention.

In FIG. 7 is shown a pair of boxer shorts (54) having an external fly portion (56) and an internal fly portion (58) with external fly portion (54) and internal fly portion (58) in combination forming an internal opening there between. Again it is to be noted that any type of suitable absorbent pad of user choice may be used, but the applicants prefer the pad (46) as taught herein. Whereby, the user can easily remove previously described adhesive strips (48, 50, & 52) and then position and adhesively attach pad (46) at a location of choice upon internal fly portion (58).

Sub
B12

Thereafter, folding each lateral wing extension (46-C & 46-D) and inserting each wing extension (46-C & 46-D) into internal opening (60) between internal fly portion (58) and external fly portion (56). Whereby, absorbent pad (46) and lateral wing extensions (46-C & 46-D) are now securely attached by adhesive residue to boxer shorts (54).

While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the spirit and scope of the invention.

U.S. Patent Documents

1494044 May., 1924 Ward et al. 2/406.
2342187 Feb., 1944 Gardener 2/400.
3368563 Feb., 1968 Scheier 604/396.
3718902 Jan., 1988 Bonito 604/396.
4743239 May., 1988 Cole 604/385.
4756709 Jul., 1988 Stevens 04/396.
4772281 Sep., 1988 Armstead 604/358.
4880423 Nov., 1989 Green 604/391.
4909804 Mar., 1990 Douglas, Sr. 604/396.
4972525 Nov., 1990 Hwang 2/406.
5098419 Mar., 1992 Gold 604/396.
5277130 Jan., 1994 Angellio et al. 604/385.
5548607 Aug., 1996 Roberts 2/406.
5711034 Jan., 1998 Cillik 4/392.
5944708 Aug., 1999 Philpott 604/393.